

Safety Data Sheet (ISO form)

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1. Product and Company Identification

Product Name **Print Cartridge SP 1200E**

Company Name : Ricoh Company, Ltd.

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2. Composition/Information on Ingredients

Substance or Preparation

Preparation

Chemical Nature

Ingredients	CAS.No.	Contents(%)
Styrene Acrylic Polymer	Confidential	>70
Carbon Black	1333-86-4	1-10
Softening materials	Confidential	1-10
Amorphouse silica	7631-86-9	0.1-1
Tin Compound	Confidential	0.1-1
Titan Oxide	13463-67-7	0.1-1
Antimony oxide	1314-60-9	0.1-1

3. Hazards Identification (Most Important Hazard)

Adverse Human Health Effects

There are no significant hazards expected with intended use.

Carcinogenicity

Carbon black and titanium dioxide contained in this product are classified to Group 2B of IARC as the result of inhalation test in use of rat.**But oral/skin test does not show carcinogenicity.****The toner containing carbon black did not show carcinogenicity in chronic inhalation exposure test in use of rat.****In the animal experiment with very high concentration of titanium dioxide (excessive burden of rat's lungs clearance mechanism (overload phenomenon)), the rat alone showed lung tumor. Under a normal use practice, the concentration should be far lower than the above; and it is assumed that there is no such use.****Also, relation between respiratory disease and work exposure of titanium dioxide is not observed with epidemiological survey.**

Environmental Effects

There are no significant hazards expected with intended use.

Physical and Chemical Hazards

There are no significant hazards expected with intended use.

The Classification of The Chemical Product

This preparation is not classified as dangerous according to Directive 1999/45/EC.

4.First-Aid Measures

Inhalation

Remove from exposure to fresh air and rinse mouth with water. Seek medical advice.

Skin Contact

Wash thoroughly with soapy water.

Eye Contact

Flush with a large amount of water until particles are removed. Seek medical advice.

Ingestion

Drink several glasses of water to dilute ingested toner. Seek medical advice.

5.Fire-Fighting Measures

Extinguishing Media

CO₂, dry chemicals, foam or water.

Specific Method

No special fire protecting method is required. Sprinkling or fire extinguishers can be used.

6.Accidental Release Measures

Personal Precautions

Do not breathe in dust.

Environment Precautions

Do not flush into sewers or watercourses.

Methods for Cleaning Up

Confirm there is no source of fire and if there is a source, remove it. Sweep up spilled powder slowly and clean remainder with wet cloth.

7.Handling and Storage

Handling(technical measures,precautions,safe handling material)

Do not handle in areas where there is wind or draught, this may cause dust to get into eyes.
Avoid breathing in dust.

Storage(technical measures,storage conditions,packaging material)

Keep out of reach of children.
Store in dry, well-ventilated area, to maintain quality the temperature should not exceed 35°C for a long time. Avoid direct sunlight.

8.Exposure Controls/Personal Protection

Respiratory Protections

None required in normal use. If the limit of exposure concentration is exceeded, use authorised respirator.

Hand Protection

Use vinyl or rubber gloves if necessary.

Eye Protection

Put on goggles if necessary.

Skin and Body Protection

Wear chemical-resistant apron or other impervious clothing if necessary.

9.Physical and Chemical Properties

Appearance

Form : Powder

Color : Black

Odour : Slightly plastic odour

Information

pH : Not applicable Measuring Temp.(degrees centigrade) : -

Boiling Point(degrees centigrade) : Not applicable

Flash Point(degrees centigrade) : Not applicable

Explosion Properties(degrees centigrade) : This product is considered a nonexplosive material under normal use condition.

Vapor Pressure(Pa) : Not applicable Measuring Temp.(degrees centigrade): -

Vapor Density(AIR=1) : Not applicable

Density (g/cm3) : 1.15 Measuring Temp.(degrees centigrade): -

Solubility

Water Solubility(g/L) : Insoluble

Water Solubility Measuring Temp.(degrees centigrade) : -

Other Solvent name : Chloroform

Other Solvent Solubility(g/L) : Slightly soluble

Other Solvent Solubility Measuring Temp.(degrees centigrade) : -

Octanol/Water Partition Coefficient

10.Stability and Reactivity

Conditions to Avoid

Not applicable in normal use.

Materials to Avoid

Not applicable in normal use condition.

Hazardous Decomposition Products

Decomposition product will not occur

11.Toxicological Information

Acute Toxicity

- Acute Oral Toxicity (LD50) : 2000 or over (Rat) (Based on other product test results of similar ingredients.)
Acute Dermal Toxicity : Not available
Acute Inhalation Toxicity : over 5 (Rat)

Sensitization

Local effects

Acute Skin Irritation(PII) : 1.0 or below (Based on other product test results of similar ingredients.)

Acute Eye Irritation : slightly irritant(Slightly irritant to a mucous membrane of eye.)

Sensitization

Acute Allergenic Effects : non-skingsensitive(Based on other product test results of similar ingredients.)

Specific Effects

Carcinogenicity :

Carbon black and titanium dioxide contained in this product are classified to Group 2B of IARC as the result of inhalation test in use of rat.

But oral/skin test does not show carcinogenicity.

The toner containing carbon black did not show carcinogenicity in chronic inhalation exposure test in use of rat.

In the animal experiment with very high concentration of titanium dioxide (excessive burden of rat's lungs clearance mechanism (overload phenomenon)), the rat alone showed lung tumor.

Under a normal use practice, the concentration should be far lower than the above; and it is assumed that there is no such use.

Also, relation between respiratory disease and work exposure of titanium dioxide is not observed with epidemiological survey.

Mutagenicity : negative(Ames test)

Effects on The Reproductive System : Does not contain substances listed as hazardous to reproductive health.

Teratogenic : Not available.

12.Ecological Information

Persistence/Degradability :

Bioaccumulation

Not known in bioaccumulation.

Ecotoxicity

Acute Toxicity for Fish (LD50) : Not classified as toxic (EU Directive 1999/45/EC)
(mg/kg/96hr)

Acute Toxicity for Daphnia (EC50) : Not classified as toxic (EU Directive 1999/45/EC)
(mg/kg/48hr)

Algae Inhibition Test (IC50) : Not classified as toxic (EU Directive 1999/45/EC)
(mg/kg/72hr)

13.Disposal Consideration

Recommended Methods for Safe Environmentally Preferred Disposal

(waste from residues/contaminated packaging)

Dispose of waste and residues in accordance with local authority requirements.

14.Transport Information

International Regulations

Land Transport

RID/ADR : [Not applicable](#)

DOT 49 CFR : [Not applicable](#)

ADNR : [Not applicable](#)

Sea Transport

IMDG Code : [Not applicable](#)

Air Transport

ICAO-TI/IATA-DGR : [Not applicable](#)

The UN Classification Number: [Not applicable](#)

Specific Precautionary Transport Measures

[Avoid direct sunlight in quality.](#)

Specific Materials to Avoid

[None in the normal transport.](#)

15.Regulation Information

Regulations

[Not applicable](#)

16.Other Information

References:

IARC(1996) "IARC Monograph on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, Vol.65, Printing Process and Printing Inks, Carbon Black and Some Nitro Compounds", Lyon, pp149-261

H.Muhle, B.Bellman, O.Creutzenberg, C.Dasenbrock, H.Emst, R.Kilpper, J.C.MacKenzie, P.Morrow, U.Mohr, S.Takenaka and R.Mermelstein(1991) "Pulmonary Response to Toner upon Chronic Inhalation Exposure in Rats" Fundamental and Applied Toxicology 17,pp280-299

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